

STUDIES IN THE EUPATORIEAE (ASTERACEAE). CLVI.

VARIOUS NEW COMBINATIONS.

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The continuing studies in the Eupatorieae have shown the need for the following new combinations in various genera.

Chromolaena heterosquamea (Urb. & Ekm.) R.M.King & H.Robinson, comb. nov. Eupatorium heterosquameum Urban & Ekman, Arkiv. Bot. (Stockh.). 23A (11): 54. 1931. Dominican Republic.

Chromolaena mendezii (DC.) R.M.King & H.Robinson, comb. nov. Eupatorium mendezii DC., Prodr. 5: 160. 1836. Mexico.

Chromolaena sinuata (Lam.) R.M.King & H.Robinson, comb. nov. Eupatorium sinuatum Lam., Encyc. 2: 407. 1788. West Indies.

Chromolaena stillingiaefolia (DC.) R.M.King & H.Robinson, comb. nov. Eupatorium stillingiaefolium DC., Prodr. 5: 160. 1836. Mexico.

Four species are added to Chromolaena, 2 from Mexico and 2 from the West Indies. The four species belong technically in the subgenus Osmiella which lacks papillae on the inner surface of the corolla lobes. The species have imbricate or totally deciduous phyllaries, have linear non-clavate style branches, and elongate anther appendages. The 2 species from the West Indies have variation in persistence of the phyllaries and have a habit similar to some of the Koanophyllon species in the area. Some intergeneric hybridization seems to be involved between Chromolaena and Koanophyllon throughout the range of the subgenus Osmiella and one Haitian species originally placed in the subgenus is such a mixture of the generic characters that it has since been treated as a monotypic genus, Osmiopsis K.& R. The removal of Osmiopsis plumeri from Chromolaena leaves the two additions in this paper as the only members of Chromolaena subgenus Osmiella in the West Indies, and these from a distinctive element probably worthy of a separate subgenus.

Ayapana stenolepis (Steetz) R.M.King & H.Robinson, comb. nov. Eupatorium stenolepis Steetz in Seemann, Bot. Voy. Herald 148, 1854. Bolivia, Panama.

The combination is necessary for this name that takes priority over Ayapana pyramidalis (Klatt) K. & R. The older name is based on a panamanian type while the Klatt name was based on bolivian material.

Ageratina oaxacana (Klatt) R.M.King & H.Robinson, comb. nov. Eupatorium oaxacanum Klatt, Abh. Naturf. Ges. Halle 15: 324, 1882. Mexico.

A duplicate of the type has been seen in material obtained on loan through the kindness of the Museum National d'Histoire Naturelle in Paris. A second immature specimen annotated by B.L.Robinson "Trapiche de la Concepcion de Comaltepec, Salle-Mexico" (BM) has also been seen.

Disynaphia praeficta (B.L.Robinson) R.M.King & H.Robinson, comb. nov. Eupatorium praefictum B.L.Robinson, Contr. Gray Herb. n.s. 68: 30, 1923. Brazil.

The species has the 5-flowered heads and the crowded spirally inserted leaves that are typical of the genus. The achene is unusually densely setiferous.

Cronquistianthus callacatensis (Hieron.) R.M.King & H.Robinson, comb. nov. Eupatorium callacatense Hieron., Engl. Bot. Jahrb. 36: 468, 1905. Peru.

The species seems more herbaceous than others presently known in the genus.

Critoniella leucolithogena (B.L.Robinson) R.M.King & H.Robinson, comb. nov. Eupatorium leucolithogenum B.L.Robinson, Contr. Gray Herb. n.s. 80: 25, 1928. Colombia.

Hebeclinium killipii (B.L.Robinson) R.M.King & H.Robinson, comb. nov. Eupatorium killipii B.L.Robinson, Contr. Gray Herb. n.s. 77: 21, 1926. Colombia.

The species of Critoniella was recently transferred into Hebeclinium even though the lack of convexity of the receptacle was noted (King & Robinson, 1975). The distinctive species has been reexamined and proves to be a Critoniella though the style branch is thicker than in other members of the genus. Examination of another Colombian species shows that it should be added to the genus Hebeclinium.

#### Reference

- King, R. M. and Robinson, H. 1975. Studies in the Eupatorieae (Asteraceae). CXLVII. Additions to the genera Amboroa, Ayapanopsis, and Hebeclinium in South America. *Phytologia* 31: 311-316.

#### Acknowledgement

This study was supported in part by the National Science Foundation Grant BMS 70-00537 to the senior author.